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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,781	02/25/2004	Sheng-Hsin Hu	K-C 16029.1	3777

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EXAMINER
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TSOY, ELENA

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 11/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/786,781

Applicant(s)

HU ET AL.

Examiner

Elena Tsoy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13-18 and 20-2220 is/are pending in the application.
- 4a) Of the above claim(s) 5 and 14-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-11, 13, 17-18, 20-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendment***

Amendment filed on September 16, 2005 has been entered. Claims 1-11, 13-18, 20-22 are pending in the application. Claims 5, 14-16 are withdrawn from consideration as directed to a non-elected invention.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 6, 8-11, 13, 17, 18, 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiltzik et al (US 20030082382) for the reasons of record set forth in paragraph 2 of the Office Action mailed on 6/13/2005 because Hiltzik et al do not set upper weight limit of coloring agent. Coating in Hiltzik et al is formed from a coating composition containing a **mixture** of a binder and a pigment (See P21). Hiltzik et al teach that 1.75 % resin may introduce 2 % of pigment (See Table VIII). Hiltzik et al teach that with a coating *greater* than about 3.5% (which covers claimed 5%), ORVR capacity dropped and would require a larger canister to have the same adsorptive capacity as pellets with less or no coating (See P60). Therefore, if 2% of pigment are applied with 1.75% of a binder, more than 3.5% of binder would provide more than 4% of pigment. Thus, 5 % of resin would introduce more than 5 % of the pigment. Moreover, Hiltzik et al teach that it is reported in the art that activated carbon coated with as much as 20 % of resin latex coating can be successfully used for adsorbing vapors between window glass sheets

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because the coating does not substantially reduce the adsorptive power of an activated carbon (See P10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used 5% or more of resin coating and, therefore, 5% or more of pigment for coating an activated carbon in Hiltzik et al with the expectation of providing the activated carbon with the desired color without substantially reducing the adsorptive power of activated carbon.

Obviously, coating may be applied to an activated carbon in the amount of up to 20 % depending on the intent of use of the final product.

3. Claims 1-4, 6, 8-11, 13, 17, 18, 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiltzik et al (US 20030082382) in view of Karapasha (WO9112030) for the reasons of record set forth in paragraph 3 of the Office Action mailed on 6/13/2005.

4. Claims 1-4, 6-11, 13, 17, 18, 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karapasha (WO9112030) in view of Hiltzik et al (US 20030082382) for the reasons of record set forth in paragraph 4 of the Office Action mailed on 6/13/2005 because Karapasha teaches the use of 15% kieselguhr plus 15% chalk dust adhered to carbon particles with ca. 6% of binder (See page 30, lines 19-20).

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiltzik et al or Karapasha in view of Hiltzik et al, in view of Cavezzan et al (US 4,954,539) for the reasons of record set forth in paragraph 5 of the Office Action mailed on 6/13/2005.

6. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiltzik et al/ Hiltzik et al in view of Karapasha/Karapasha in view of Hiltzik et al, and further in view of

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Hogenson (US 4,643,783) for the reasons of record set forth in paragraph 6 of the Office Action mailed on 6/13/2005.

***Response to Arguments***

7. Applicants' arguments filed September 16, 2005 have been fully considered but they are not persuasive.

(A) Applicants argue that Hiltzik et al discloses adding pigments to the coating in amounts of only 2% or less (See Table VIII). Hiltzik et al disclose a continuous film to provide the desired purpose of reducing dust. As Hiltzik et al specifically disclose forming a thin continuous film on the activated carbon, one skilled in the art would not find any suggestion or motivation to include higher amounts of pigment materials such as mica/titanium dioxide, which in higher amounts would be expected to result in a discontinuous film.

The Examiner respectfully disagrees with this argument. Hiltzik et al teach that a continuous film may be **porous** or non-porous, depending on the irregularity of surface shape of the carbon material. The appearance of a porous continuous film occurs more often on the more irregular shaped granular activated carbons than on shaped activated carbons. See P23. Since the activated carbon has generally irregular shape, the film is **porous** and provides dust control. Therefore, in contrast to Applicants argument, the continuous film in Hiltzik et al is **porous**.

(B) Applicants argue that Hiltzik et al only disclose using pigments in amounts of 2% or less, it does not disclose or suggest using 5% or more, as in Applicants' claimed invention. The Hiltzik et al. Publication actually teaches away from Applicants' recited higher amounts of masking agent, so as to not produce a discontinuous film. Furthermore, the Hiltzik et al. Publication does not disclose or suggest an activated carbon coating material that includes a

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silicone compound having an add-on level of at least about 5%, as in Applicants' claimed invention. The Examiner alleges the Hiltzik et al. Publication discloses in Paragraph 60 a coating of greater than about 3.5%” if a larger canister is used. However, the Examiner should read Paragraph 60 more closely, and in context with Paragraph 59. When read in proper context, Paragraphs 59 and 60 say that with coatings of polyethylene greater than 3.5%, ORVR capacity dropped and a larger canister will be required. Paragraph 60 continues on to say that other coating materials, such as the siloxane material in Table V, would have to be used at less than a coating of 3% due to their great packing disruption and certain loss of BWC, GWC and ORVR capacity.

The Examiner respectfully disagrees with this argument. Applicant's interpretation is wrong if only from teaching that siloxane material in Table V, is used at 3.4 % (not less than 3%). Also, Table I shows siloxane being used at 3.4 %, acrylic polymer (not PE) being used at 4.3 % (See Table IV).

As to 5% of pigment, coating in Hiltzik et al is formed from a coating composition containing a **mixture** of a binder and a pigment (See P21). Therefore, if 2% of pigment are applied with 1.75% of a binder, more than 3.5% of binder would provide more than 4% of pigment in the coating.

(C) Applicants argue that Karapasha does not disclose “any known polymer without limitation,” but discloses particular types of binder materials that were/are known in the art and that would not continuously coat the carbon. The binders of the Karapasha Publication are starch, cellulose, gum acacia/gum arabic, and soluble gelatin materials.

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The Examiner respectfully disagrees with this argument. Karapasha teaches: "The binder materials are conventional materials well-known in commerce under various trade names such as GELFOAM, PURAGEL, LAVERAL, MATRIN and METHOCEL, said names being mentioned here **by way of example**, and **NOT by way of limitation**" (See page 14, lines 33-38). Chemically, such binder materials comprise various starch, cellulose, gum acacia/gum arabic, and soluble gelatin, etc. materials (See page 15, lines 2-5).

In contrast to Applicants argument, this teaching **CANNOT** be interpreted that binders of the Karapasha Publication are **ONLY** starch, cellulose, gum acacia/gum arabic, and soluble gelatin materials.

(D) Applicants argue that the Karapasha Publication teaches away from the continuous polymer film of the Hiltzik et al.

The Examiner respectfully disagrees with this argument. Hiltzik et al is a secondary reference which is relied upon to show that silicone emulsion (See Table I) or water insoluble elastomer are suitable for the use as a binder in combination with a masking agent for producing coated activated carbon material in a fluidized bed (See P30) by spraying the coating liquid onto the activated carbon material while it is fluidized (See P25), and drying (curing) the coating liquor to form a coating material at from just below ambient at about 50°F or ambient 70°F (21°C) to 280°F (121°C) (See P29) using heated air (claimed heated gas) (See P36).

It is held that the selection of a known material based on its *xsuc* for its intended use supported a prima facie obviousness determination in *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945) "Reading a list and selecting a known compound to meet known requirements is no more ingenious than selecting the last piece to put in the last

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opening in a jig-saw puzzle." 325 U.S. at 335, 65 USPQ at 301.). See also *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960) (selection of a known plastic to make a container of a type made of plastics prior to the invention was held to be obvious); *Ryco, Inc. v. Ag-Bag Corp.*, 857 F.2d 1418, 8 USPQ2d 1323 (Fed. Cir. 1988) (Claimed agricultural bagging machine, which differed from a prior art machine only in that the brake means were hydraulically operated rather than mechanically operated, was held to be obvious over the prior art machine in view of references which disclosed hydraulic brakes for performing the same function, albeit in a different environment.). See MPEP 2144.07.

One of ordinary skill in the art would have reasonable expectation of success in using a **silicone emulsion** of Hiltzik et al as a binder in Karapasha.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.



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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is 571-272-1429. The examiner can normally be reached on Monday-Thursday, 9:00AM - 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elena Tsoy  
Primary Examiner  
Art Unit 1762

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November 1, 2005